

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002260**Date Inspected:** 04-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island

CWI Name:	Jiang Jian Fei	CWI Present:	Yes	No
Inspected CWI report:	Yes No N/A	Rod Oven in Use:	Yes No N/A	
Electrode to specification:	Yes No N/A	Weld Procedures Followed:	Yes No N/A	
Qualified Welders:	Yes No N/A	Verified Joint Fit-up:	Yes No N/A	
Approved Drawings:	Yes No N/A	Approved WPS:	Yes No N/A	
		Delayed / Cancelled:	Yes No N/A	
Bridge No:	34-0006	Component:	OBG and Tower	

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present observe production welding of the deck plate U-rib splice welds and perform random Visual Testing (VT) of the Orthotropic Box Girder (OBG), for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

The Caltrans QA Inspector observed ZPMC welder Mr. Song Yin Shu performing Flux Cored Arc Welding (FCAW) on U-rib Complete Joint Penetration (CJP) splice welds DP298-001-192 and DP298-001-19193 in the 3G position. Splice welds were back gouged to sound metal, ground smooth, and welding completed. The following parameters were recorded from weld DP437-001-190, amperage 210, voltage 25.2, travel speed of 110 mm/min., with a heat input of 2.86 kJ/mm. The above mentioned welding appeared to be in conformance with the posted welding procedure specification, WPS-B-T-2233-B-U2-F. Please see the attached photo of the above mentioned welding.

The Caltrans QA Inspector performed visual inspection of OBG 8.565 meter deck panel DP057-001 (welds 001 through 007) U-rib Partial Joint Penetration (PJP) welds. ZPMC performed visual inspection then immediately performed grinding of the discontinuities marked. Visual testing of welding was performed in accordance with contract documents. The following discontinuities were found during inspection on the Submerged Arc Welding (SAW) cover pass, incomplete fusion, overlap, undercut, underfill and oversize welds. Welding discontinuities were marked on deck panel with a permanent marker, length and Y location recorded. Visual Inspection results were distributed to the appropriate personnel for review. An excavation area on weld 006 in the deck plate was found measuring approx. 1 mm in depth, please see pictures of the base metal excavation below. Please see the

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attached photo of the above mentioned excavation area. The list below shows a summary of discontinuities found during visual inspection.

DP057-001

DP057-001-001, Incomplete Fusion 1 area, Oversize 1 area, and Underfill 10 areas.

DP057-001-002, Underfill 10 areas.

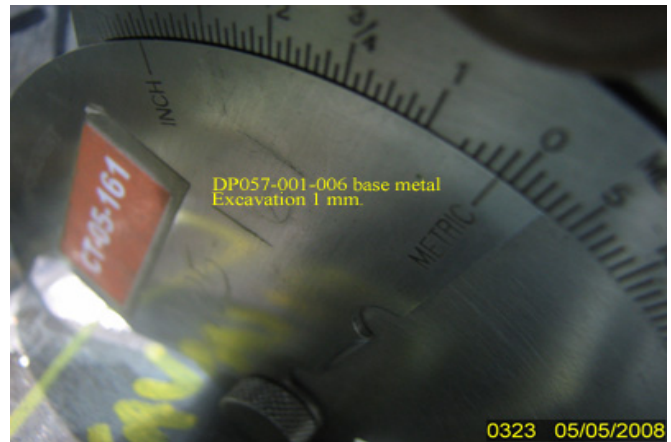
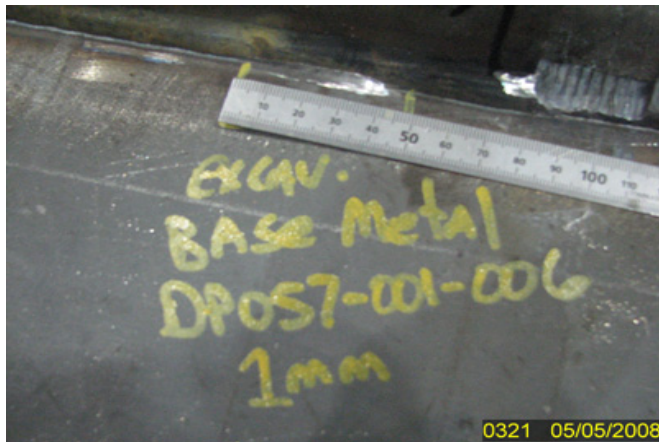
DP057-001-003, Underfill 3 areas.

DP057-001-004, Underfill 4 areas.

DP057-001-005, Underfill 13 areas, and Incomplete fusion 2 areas.

DP057-001-006, Oversize 1 area, Underfill 1 area, Incomplete fusion 1 area.

DP057-001-007, Underfill 3 areas.



Summary of Conversations:

No relevant conversations occurred this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Viars,Larry	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
